IN THE CLAIMS:

1.   A method for imaging an optical code comprising the steps of:

consecutively imaging an optical code respectively using at least a first and a

5   second imaging setting;

generating at least first and second sets of image data respectively corresponding to the

first and second imaging settings;

evaluating at least one of the first and second sets of image data; and

selecting at least one of the first and second sets of image data in accordance with the

10   evaluation.

2.   The method according to Claim 1, wherein the step of consecutively imaging

includes the step of imaging using the second imaging setting immediately after imaging using

the first imaging setting.

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3.   The method according to Claim 1, further comprising the steps of :

evaluating a decodability quality of the first set of image data; and

configuring the second imaging setting according to the evaluation results.

20   4.   The method according to Claim 1, wherein the first and second imaging settings

each include at least one of a focus point setting, an illumination level setting, a signal gain

setting, and an exposure setting.

5.   The method according to Claim 1, wherein the evaluating step includes evaluating a decodability quality of at least one of the first and second sets of image data.

6.   The method according to Claim 1, wherein the evaluation step includes evaluating complementary portions of image data of the first and second sets of image data.

7   The method according to Claim 1, wherein the first imaging setting includes a first focal point setting, and the second imaging setting includes a second focal point setting, wherein the first and second focal point settings are different.

8.   The method according to Claim 1, wherein the selecting step includes the steps of:

comparing evaluation results corresponding to the first and second sets of image data; and

selecting at least one of the first and second sets of image data in accordance with the comparison.

9.   The method according to Claim 1, wherein:

the evaluating step includes evaluating only one set of image data and determining if results of the evaluation satisfy a predetermined condition;

the selecting step includes selecting the evaluated set of image data if the results of the evaluation satisfy the predetermined condition, and further comprising the steps of:

evaluating the other set of image data if the results of the evaluation do not satisfy the

predetermined condition and comparing the evaluation results corresponding to the first and

second sets of image data; and

selecting at least one of the first and second sets of image data in accordance with the

5   comparison.

10.   The method according to Claim 1, further comprising the step of decoding

image data from the selected set of image data that corresponds to the optical code.

10   11.   The method according to Claim 1, wherein the evaluating step includes the steps

of:

locating image data in at least one of the respective first and second sets of image data

that corresponds to at least a portion of the optical code; and

evaluating the respective located data.

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12.   The method according to Claim 1, wherein a location of the image data in one of

the first and second sets of image data is used to locate image data that corresponds to at least a

portion of the optical code in the other set of image data.

20   13.   The method according to Claim 1, further comprising the step of receiving at

least one of the first and second sets of image data while performing the evaluating step.

14.   A system for imaging an optical code comprising:

means for consecutively imaging an optical code respectively using at least a first and a second imaging setting;

means for generating at least first and second sets of image data respectively

5   corresponding to the first and second imaging settings;

means for evaluating at least one of the first and second sets of image data; and

means for selecting at least one of the first and second sets of image data in accordance with the evaluation.

10   15.   The system according to Claim 14, wherein the means for consecutively imaging includes means for imaging using the second imaging setting immediately after imaging using the first imaging setting.

16.   The system according to Claim 14, further comprising:

15   means for evaluating a decodability quality of the first set of image data; and

means for configuring the second imaging setting according to the evaluation results.

17.   The system according to Claim 14, wherein the first and second imaging settings

20   each include at least one of a focus point setting, an illumination level setting, a signal gain setting, and an exposure setting.

18.   The system according to Claim 14, wherein the means for evaluating includes means for evaluating a decodability quality of at least one of the first and second sets of image data.

5   19.   The system according to Claim 14, wherein the means for evaluation includes means for evaluating complementary portions of image data of the first and second sets of image data.

20.   The system according to Claim 14, wherein the first imaging setting includes a

10   first focal point setting, and the second imaging setting includes a second focal point setting, wherein the first and second focal point settings are different.

21.   The system according to Claim 14, wherein the means for selecting includes:

means for comparing evaluation results corresponding to the first and second sets of

15   image data; and

means for selecting at least one of the first and second sets of image data in accordance with the comparison.

22.   The system according to Claim 14, wherein the means for evaluating

20   and the means for selecting collectively comprise at least one processor for performing the steps of:

evaluating only one set of image data and determining if results of the evaluation satisfy a predetermined condition;

selecting the evaluated set of image data if the results of the evaluation satisfy the

predetermined condition;

evaluating the other set of image data if the results of the evaluation do not satisfy the

predetermined condition and comparing the evaluation results corresponding to the first and

5   second sets of image data; and

selecting one of the first and second sets of image data in accordance with the

comparison.

23.   The system according to Claim 14, further comprising means for decoding

10   image data from the selected set of image data that corresponds to the optical code.

24.   The system according to Claim 14, wherein the means for evaluating includes:

means for locating image data in at least one of the respective first and second sets of

image data that corresponds to at least a portion of the optical code; and

15   means for evaluating the respective located data.

25.   The system according to Claim 14, wherein a location of the image data in one of

the first and second sets of image data is used to locate image data that corresponds to at least a

portion of the optical code in the other set of image data.

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26.   The system according to Claim 14, wherein the means for evaluating receives

at least one of the first and second sets of image data is being received while the means for

evaluating evaluates.

27.   An optical code reading system comprising:

an imaging engine having a lens assembly and a photo sensor array for consecutively

imaging an optical code located in a field of view of the imaging engine respectively using at

least a first and a second imaging setting, and generating at least first and second sets of image

5   data respectively corresponding to the first and second imaging settings; and

processing means for evaluating at least one of the first and second sets of image data,

and selecting at least one of the first and second sets of image data in accordance with the

evaluation.

10   28.   The optical code reading system according to Claim 27, wherein the processing

means further configures the second imaging setting in accordance with evaluation of the first set

of image data.

29.   The optical code reading system according to Claim 28, wherein the imaging

15   engine further includes at least one of an illuminator assembly, a shutter assembly,

signal processing circuitry, an illuminator control assembly for controlling the illuminator

assembly, an exposure control assembly for controlling the shutter assembly, signal processing

control circuitry for controlling the signal processing circuitry, and a focus control assembly for

controlling the lens assembly; and

20   wherein the processing means generates control signals in accordance with the

second image setting for controlling at least one of the illuminator control assembly, the

exposure control assembly, the signal processing control circuitry, and the focus control

assembly.

30.   The optical code reading system according to Claim 27, wherein the processing

means evaluates complementary portions of image data of the first and second sets of image data.

31.   An optical code reading system comprising:

5   an optical code reader comprising:

a lens assembly for focusing incident light;

a photo sensor array for sensing the focused incident light and generating image

data corresponding to two different imaging settings; and

transmission means for transmitting the image data; and

10   a processor externally located from said optical code reader for receiving the image data

corresponding to the two different imaging settings and processing the image data.

32.   A method for imaging an optical code comprising the steps of:

consecutively imaging said optical code respectively using at least a first and a

15   second imaging setting;

generating at least first and second sets of image data respectively corresponding to the

first and second imaging settings; and

transmitting the first and second sets of image data to an external processor for processing

of the image data, wherein the external processor processes the first and second sets of image

20   data in accordance with a processing method comprising the steps of:

evaluating at least one of the first and second sets of image data; and

selecting at least one of the first and second sets of image data in accordance with

the evaluation.

33.   A computer readable medium storing programmable instructions capable of being

executed by a processor for performing the steps of:

receiving at least first and second sets of image data corresponding to consecutive

imaging of an optical code using respective at least first and second image settings;

5   evaluating at least one of the first and second sets of image data; and

selecting at least one of the first and second sets of image data in accordance with the

evaluation.

34.   A computer data signal embodied in a transmission medium for execution

10   by at least one processor for processing an imaged optical code, the data signal comprising:

a code segment including instructions for receiving at least first and second sets of image

data corresponding to consecutive imaging of an optical code using respective at least first and

second image settings;

a code segment including instructions for evaluating at least one of the first and second

15   sets of image data; and

a code segment including instructions for selecting at least one of the first and second sets

of image data in accordance with the evaluation.